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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,740	03/31/2006	Neil Alexander Downie	06260 USA	1495

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PATENT DEPARTMENT
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EXAMINER	
PATEL, NIHIR B	

ART UNIT	PAPER NUMBER
3772	

MAIL DATE	DELIVERY MODE
02/19/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/512,740	DOWNIE ET AL.	
	Examiner	Art Unit	
	NIHIR PATEL	3772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *election filed on 10/22/2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *7,8,15 and 17-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,12,13 and 16* is/are rejected.

7)☒ Claim(s) *10,11,14 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *EP References*.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the current application, filed on October 27th, 2004.

Election/Restrictions

1. Applicant's election without traverse of **species I (figs. 1-3 and claims 1-6, 9-14, 16-20and 24)** in the reply filed on October 22nd, 2010 is acknowledged.

2. Claims **7, 8, 15 and 17-23** are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 22nd, 2010.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims **1, 3-6 and 16** are rejected under 35 U.S.C. 102(b) as being anticipated by Lampotang et al. (US 6,131,571).

5. **As to claim 1,** Lampotang teaches an apparatus that comprises a main gas circuit for re-circulating the medical gas mixture and comprising: a constant speed circulation pump **36** for

pumping gas through the main circuit and increasing the gas pressure from a lower pressure to a higher pressure **(see fig. 2; col. 7 lines 50-55)**, a pressure maintaining valve **132** downstream of the pump and dividing the main circuit into a higher pressure section and a lower pressure section **(see fig. 2; the valve has a different task in the system disclosed by the current reference but is suitable for maintaining the pressure)**, a medical gas outlet **14** in the higher pressure section **(see fig. 2; see col. 7 lines 20-25))**, a spent gas inlet **14 (see fig. 2; see col. 7 lines 20-25)** in the lower pressure section, a first feed gas supply inlet **200 (see fig. 2; col. 16 lines 20-25)**, a second feed gas supply inlet **202 (see fig. 2; see col. 16 lines 20-25)** downstream of the gas outlet and upstream of the pressure reduction valve, concentration determining means for measuring the concentration of at least one component of the re-circulating medical gas mixture **120 (see fig. 2; as the re-circulated gas enters the circulation loop 12 through the Y piece and the endotracheal tube 14/16)** and generating a signal **124 (see fig. 2; col. 13 lines 35-40)** indicative of said concentration, circuit volume regulating means **212 (see fig. 2; col. 16 lines 63-67)** for varying the volume of the main circuit at a location in the lower pressure section for maintaining a predetermined gas flow to the pump and generating a signal **226 (see fig. 2; col. 17 lines 10-15)** indicative of said volume, and means for venting gas from the main circuit **130/150 (see fig. 2; col. 13 lines 55-60 and col. 14 lines 35-40)**; a first feed gas supply conduit **200 (see fig. 2; col. 16 lines 25-30)** for supply to the first feed gas inlet of a first feed gas of predetermined composition; first feed gas supply flow control means for controlling the flow of first feed gas through the first gas supply conduit in response to the signal from the concentration determining means to maintain constant the medical gas composition at the pump inlet **(see col. 13 lines 38-44)**; a second feed gas supply conduit **202 (see fig. 2; col. 16 lines 25-30)** for supply

to the second feed gas inlet of a second feed gas of predetermined composition different from the first feed gas; second feed gas supply flow control means for controlling the flow of second feed gas through the second gas supply conduit in response to the signal from the circuit volume regulating means to maintain constant the recirculating medical gas composition **(see col. 21 lines 32-44)**; and a medical device supply circuit **14/16 (see fig. 2; col. 7 lines 15-30)** for connecting the medical device to the main circuit to receive a portion of the medical gas from the medical gas outlet thereof and to return spent gas to the spent gas inlet thereof and comprising: flow control means for controlling flow of the medical gas to the medical device and purification means **60** for removing contaminant(s) from the spent gas **(see fig. 2; col. 8 lines 22-30)**.

6. **As to claim 3,** Lampotang teaches an apparatus wherein the pressure maintaining valve is a spill valve **182, 188, 194 (see fig. 2; col. 15 lines 55-67 and col. 16 lines 1-10)**.

7. **As to claim 4,** Lampotang teaches an apparatus wherein the circuit volume regulating means comprises expansion bellows **210 (see col. 17 lines 1-15)**.

8. **As to claim 5,** Lampotang teaches an apparatus wherein the concentration determining means comprises a relatively high gain analog electrical circuit for the signal thereof and the circuit volume regulating means comprises a relatively low gain analog electrical circuit for the signal thereof, whereby the increase in flow rate of the first feed gas is relatively quick and the increase in flow rate of the second feed gas is relatively slow **(see col. 21 lines 32-45)**.

9. **As to claim 6,** Lampotang teaches an apparatus wherein the concentration determining means measures at least oxygen concentration **(see col. 13 lines 33-44)**.

10. **As to claim 16,** Lampotang teaches method steps comprising recirculating the medical gas mixture in a main circuit having a higher pressure section maintained at constant pressure in

series with a lower pressure section **(see fig. 2; col. 7 lines 50-55)**; withdrawing a portion of the medical gas mixture from the higher pressure section and feeding said portion to the medical device **(see fig. 2; col. 13 lines 25-45)**; removing contaminant(s) from the spent gas mixture from the medical device and returning the decontaminated spent gas to lower pressure section **(see col. 8 lines 22-30)**; replenishing components in the medical gas mixture by addition of feed gases to maintain the recirculating medical gas composition constant; and varying the volume of the main gas circuit to maintain the gas flow therein **(see col. 17 lines 1-20)**.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claim **2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lampotang et al. (US 6,131,571) in view of Siemens (EP-A-0 745 405).

14. **As to claim 2,** Lampotang substantially discloses the claimed invention; see rejection of claim 1 above, but does not disclose the feed gas supply inlets are located in the higher pressure section. Siemens discloses an apparatus that does disclose the feed gas supply inlets **10, 12 and 14** are located in the higher pressure section **(see fig. 1; col. 5 lines 19-34)**. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lampotang's invention by providing the feed gas supply inlets are located in the higher pressure section as taught by Siemens in order to provide the user/patient with the correct amount of gas.

15. Claim **9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lampotang et al. (US 6,131,571) in view of Dyachenko (SU-A-1 188 638).

16. **As to claim 9,** Lampotang substantially discloses the claimed invention; see rejection of claim 1 above, but does not disclose an ultrasonic xenon analyzer. Dyachenko discloses an apparatus that does disclose an ultrasonic analyzer **(see col. 1 lines 1-5).** Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lampotang's invention by providing an ultrasonic analyzer as taught by Dyachenko in order to control the mixture of xenon being delivered to the user/patient.

17. Claims **12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lampotang et al. (US 6,131,571) in view of Vladimirovna (EP-A-0 861 672).

18. **As to claim 12,** Lampotang substantially discloses the claimed invention; see rejection of claim 1 above, but does not disclose a medical device that is connected to the medical device

supply circuit of an apparatus. Vladimirovna discloses an apparatus that does disclose a medical device that is connected to the medical device supply circuit of an apparatus **(see fig. 1; col. 4 lines 5-10)**. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lampotang's invention by providing a medical device that is connected to the medical device supply circuit of an apparatus as taught by Vladimirovna in order to minimize the leakage and to provide the correct amount of gas to the user/patient.

19. **As to claim 13,** Lampotang substantially discloses an apparatus wherein the medical device is an artificial ventilator **92 (see fig. 2; col. 8 lines 25-35)**.

Specification

20. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(l) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

21. The disclosure is objected to because of the following informalities: The applicant's specification does not include section order as required above.

Appropriate correction is required.

Allowable Subject Matter

22. Claims **10, 11, 14 and 24** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose the means for venting gas from the main circuit comprising a gas recovery space for storing at least a portion of the vented gas or a method for the extracorporeal treatment of blood by contacting blood with a recirculating medical gas mixture in a device provided with the medical gas.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIHIR PATEL whose telephone number is (571)272-4803. The examiner can normally be reached on 7:30 to 4:30 every other Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nihir Patel/
Examiner, Art Unit 3772

/Patricia Bianco/

Supervisory Patent Examiner, Art Unit 3772